

REMARKS

Claim 33 has been canceled. Claims 1-32 and 34-35 are pending in the application. Applicant amends claims 1, 30-32, and 35 for further clarification. No new matter has been added.

Applicant, again, acknowledges with appreciation the Examiner's allowance of claims 34-35, and the finding that claims 6-7, 10-15, 17-18, 21-25, and 29 contain allowable subject matter. Applicant respectfully submits that claim 1, from which claims 6-7, 10-15, 17-18, 21-25, and 29 depend, is patentable over the references cited against it, as demonstrated below. Accordingly, Applicant respectfully requests that the Examiner allow claims 6-7, 10-15, 17-18, 21-25, and 29.

Claims 1-2, 4-5, 8, 16, 19, 26-28, and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art ("AAPA") in view of U.S. Patent Application Publication No. 2002/0080719 to Parkvall et al.; claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Parkvall et al., and further in view of U.S. Patent Application Publication No. 2002/0094778 to Cannon et al.; claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Parkvall et al., and further in view of U.S. Patent Application Publication No. 2003/0166406 to Zhang et al.; claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Parkvall et al., and further in view of U.S. Patent No. 7,403,892 to Sjoberg et al.; and claims 30 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Parkvall et al., and further in view of U.S. Patent Application Publication No. 2003/0103514 to Nam et al. Applicant respectfully traverses the rejections.

The Examiner maintained that Parkvall et al. allegedly suggest the claimed uplink transmission scheduling features, which the Examiner conceded were absent from the disclosures of AAPA. In support of maintaining this rejection, the Examiner, again, argued

that the "uplink" scheduling based on a "downlink" channel quality between two particular nodes, as described in Parkvall et al., fairly suggests the onward scheduling features of the claimed invention where "uplink" scheduling between two nodes is based on a "downlink" channel quality between one of those two nodes and onward nodes.

Applicant respectfully submits that the Examiner's alteration of the explicit disclosure in Parkvall et al. is based solely on improper hindsight from the claimed invention itself, and one of ordinary skill in the art at the time the claimed invention was made would have no objective reason to make such an alteration.

Again, paragraph [0050] of Parkvall et al. describes as follows:

"Reference is now made to the flowchart diagram of FIG. 7 illustrating scheduling procedures in accordance with a general embodiment of the present invention. Initially, data is detected in a transmitting node to be sent downlink (or uplink) (step S2). The transmitting node determines the quality of the uplink channel (or downlink channel) (step S4). The transmitting node then schedules the data transmission over the downlink channel (or the uplink channel) when the quality of the uplink channel (or the downlink channel) is sufficient (step S6)." (Emphasis added)

As shown above, consistent with paragraph [0025] of Parkvall et al., paragraph [0050] only includes description of steps performed by a transmitting node, and does not include any disclosure or suggestion of any features or steps in connection with any other node.

And the corresponding discussion by the Examiner about "both uplink or downlink channels" are still in the context of these channels from/to this same particular "transmitting node." Indeed, paragraph [0051] of Parkvall et al. describes further optional procedures in connection with these steps, and explicitly describes such "both" channels as being to the same particular "transmitting node" or "UE":

"Additional, optional scheduling procedures for downlink data transmissions are illustrated in flowchart format in FIG. 8 where other optional factors are taken into consideration in addition to the quality of the uplink channel.

A decision may be made in optional step S10 whether the uplink communication from the UE is in soft handover. If the uplink is in soft handover or in any event, a decision is made in step S12 to determine whether the uplink channel quality is sufficient. If it is not, downlink data transmission to the UE is delayed (step S14). If the uplink signal quality is sufficient or the uplink is not in soft handover, one or more other scheduling conditions may be checked (step S16). If those one or more other scheduling conditions are met, the data can be transmitted downlink to the UE (step S18). Otherwise, downlink data transmission to the UE is delayed." Paragraph [0051] of Parkvall et al. (Emphasis added)

Thus, Parkvall et al., as cited and relied upon by the Examiner, fail to suggest scheduling transmissions from one user equipment to a base station in dependence on a measure of a quality of service from the base station to another user equipment—namely, the claimed features in connection with “scheduling uplink transmissions from the source user equipments to the base station in dependence on the measure of the downlink quality of service (from the base station to a plurality of destination user equipments).”

In response to Applicant's assertions, the Examiner, in the July 23 Advisory Action, has apparently relied upon AAPA to allegedly cure this deficiency of Parkvall et al. But page 1, lines 10-30 of the specification cited by the Examiner only includes description of convention transmissions between UEs and a base station. And page 2, lines 15-28 of the specification cited by the Examiner still only includes description of uplink scheduling that does not involve any onward evaluations of channel quality beyond the base station:

"Various techniques are known for scheduling of uplink transmissions. The aim of these scheduling techniques is to manage the way in which the UEs transmit to the base station in order to meet certain criteria, such as interfere levels, fairness or throughput.

In one scheduling technique, known as time scheduling, a single UE is given the full uplink resources for a given period of time. Some mechanism is implemented for determining which UE has the channel resources at any one time. For example, each UE may take it in turns to transmit its data, or else the UE which is given the channel resources may be

selected by taking into account the channel quality...” [of that particular UE.] (Emphasis added)

Thus, even assuming, arguendo, that it would have been obvious to one skilled in the art at the time the claimed invention was made to combine AAPA and Parkvall et al. at the time the claimed invention was made, such a combination would have, at most, suggested scheduling uplink transmissions amongst source UEs to a base station based on each of their corresponding downlink channel qualities with the base station. And such a combination would still have failed to disclose or suggest scheduling transmissions from one source user equipment to a base station in dependence on a measure of a quality of service from the base station to plurality of other destination user equipments—namely, the claimed features in connection with “scheduling uplink transmissions from the source user equipments to the base station in dependence on the measure of the downlink quality of service (from the base station to a plurality of destination user equipments).”

In other words, even assuming, arguendo, that it would have been obvious to one skilled in the art at the time the claimed invention was made to combine AAPA and Parkvall et al. at the time the claimed invention was made, such a combination would still have failed to disclose or suggest,

“[a] method of transmitting data packets in an uplink from a plurality of source user equipments to a base station, the data packets being for onward transmission to a plurality of destination user equipments, the method comprising:

determining a measure of a quality of service from the base station to the plurality of destination user equipments; and

scheduling uplink transmissions from the source user equipments to the base station in dependence on the measure of a quality of service from the base station to the plurality of destination user equipments,

wherein the scheduling is with greater priority for one of the plurality of destination user equipments whose downlink quality of service is relatively high than another of the plurality of destination user equipments whose downlink quality of service is relatively low,” as recited in claim 1. (Emphasis added)

Accordingly, Applicant respectfully submits that claim 1, together with claims 2, 4-5, 8, 16, 19, and 26-28 dependent therefrom, is patentable over AAPA and Parkvall et al., separately and in combination, for at least the foregoing reasons. Claims 31 and 35 incorporate features that correspond to those of claim 1 cited above, and are, therefore, patentable over the cited references for at least the same reasons.

The Examiner cited Cannon et al., Zhang et al., Sjoberg et al., and Nam et al. as further combining references to specifically address the respective additional features recited in claims 3, 9, and 20, which depend from claim 1, and claims 30 and 32, which also incorporate features that correspond to those of claim 1 cited above. As such, further combinations with Cannon et al., Zhang et al., Sjoberg et al., and Nam et al. would still have failed to cure the above-described deficiencies of AAPA and Parkvall et al., even assuming, arguendo, that such further combinations would have been obvious to one skilled in the art at the time the claimed invention was made. Accordingly, Applicant respectfully submits that claims 3, 9, 20, 30, and 32 are patentable over the cited references for at least the foregoing reasons.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,

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